

Biology 11: Human Biology
Section 11862
Mission College, Summer 2011

Instructor: Kelly Neary
Office Hours: Tues & Thurs 2:00-2:15 in SCI-130
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Welcome to Biological Sciences 11! This course is designed to introduce you to the biology of human beings. We will be covering the evolution of humans, human diversity, heredity, ecology, the scientific method, and the basics of how the major organ systems in the body work.

Student Learning Outcomes

Students will be able to:

- Describe the scientific method
- List the components of a typical cell, describe the structure and function of each, and summarize cellular respiration, transport mechanisms, cell division and protein synthesis
- Describe the function of the major body systems and the different homeostatic mechanisms controlling their physiological variables
- Describe the molecular basis of biological inheritance, summarize the principles behind Mendelian genetics, and explain human genetics including a discussion of various genetic disorders
- Explain the theory of evolution by means of natural selection, describe population evolution and speciation, and summarize human evolution
- Describe how organisms interact with their environments and explain the relationship that humans have with their environment

Lecture: 6.8 weekly online hours of lecture

Lab: Tuesdays and Thursdays 2:20pm-5:30pm in Science 220

Required texts and materials:

Lecture textbook: Belk and Borden. 2009. Human Biology. First Edition. Pearson Education.

Lab manual: Mader, Sylvia S. 2011. Laboratory Manual: Human Biology for Biosc 11, McGraw Hill Primis custom manual (available only at the Mission College bookstore).

Scantron forms: 4 scantron forms (type 882; found at bookstore) and a sharpened #2 pencil.

Lecture portion of the course:

The lecture portion of the course is conducted online. You are expected to spend a minimum of 6.8 hours per week on the lecture content. Materials available to you online include textbook chapter presentations, PowerPoint handouts and review quizzes. Your participation is required. A total of 700 points will be earned for the lecture portion of the course.

Lecture exams:

Lecture exams are to be taken in person, on campus. See the attached schedule for dates and times. If you are unable to attend the mandatory, in-person lecture exams due to class or work conflicts, please do not add this course. Lecture exams will cover topics discussed in lecture. Anything found in the textbook which I do not cover will NOT be found on the

exam. Each exam will be objective, consisting of 50 multiple choice questions worth 2 points each for a total of 100 points. Four exams are scheduled for the lecture portion of the course (3 midterms and a final). None of the exams, including the final exam, are cumulative.

Make-up exam policy:

Lecture exams must be taken at the scheduled time. Again, if you are unable to attend the mandatory, in-person lecture exams due to class or work conflicts, please do not add this course. If you have a valid reason for missing an exam, which is accepted by the instructor, you will be excused from the exam. In that case, your other three exam grades will be averaged together to obtain the grade on the exam that you missed. This can only be done ONCE during the semester. Reasons that WILL be accepted: illness accompanied by a doctor's note; death in the family accompanied by proper documentation. It is the student's responsibility to notify the instructor no later than the day of the exam if unable to make the exam date, or zero points will be awarded. College regulations state that a student who fails to take the Final Exam will be given an F grade for the course.

Lecture quizzes

You will be taking one quiz for every lecture reading assignment and corresponding presentation. Each quiz is worth 10 points. These quizzes are administered online through the Angel course website. You only have one attempt at each quiz and a maximum of 30 minutes. Do not begin the quiz until you are prepared and have a 30 minute block of time to complete the quiz. All quizzes are **due by 2:00PM** on the date indicated on the attached schedule. After the submission deadline the quiz will remain open and you will still be able to take the quiz. However, if you want to earn points for the quiz, you need to complete it by the deadline. For example, if you miss a quiz and take it the morning after the deadline, you will still be able to complete the quiz but will receive no credit for it. Students opt to still take the quiz so that they can still use the quiz as a study tool for the lecture exam. But if you miss the deadline, you are not required to still complete the quiz. Quizzes must be taken during the scheduled window of opportunity and **cannot under any circumstances be made up**. There are a total of 23 lecture quizzes; your highest 20 out of 23 scores will count toward your final grade.

Writing assignment:

Collect one article on a topic relevant to Human Biology. Submit a copy of the article for approval by **June 23rd**. Submit a written essay that summarizes the article by **July 19th**. Because of the number of non-reputable articles, I am limiting the magazines/journals from which you may choose your article. The following periodicals are acceptable: Science; Nature; Journal of the American Medical Association (JAMA); Scientific American; Discover Magazine; Time Magazine; Newsweek. Do not use articles from the internet unless they come from the online versions of the periodicals listed above. The article must have been published since January 2009. The essay must be at least three pages in length (Times New Roman font, 12 point, double spaced, 1 inch margins on all sides), so make sure you pick an article that you can write that much about! Please hand-write only your name at the top of the first page of your summary, rather than taking space away from your essay by typing name, date, etc. In other words, your essay must fill up ALL three pages. You will lose points for the following: poor grammar/spelling, paper too short, failure to follow editing instructions outlined above, failure to turn in paper on time, and content. I will have a grading rubric for this writing assignment; if you are interested in seeing the

point break-down please let me know. Come see me EARLY if you need help. **Plagiarism:** The aim of this assignment is to assess your ability to read and comprehend published written works which you can then put into your own words. Sometimes students will submit assignments in which they've cut and pasted several paragraphs of material from the article. Apart from a direct quotation with citation (usually 50 words or less – which should be used minimally), it is plagiarism to cut and paste, or hand copy, any material from the article (or any other source) into your own document, even if you cite the author or URL as a source. Changing a word or two here and there doesn't make it any better! Any assignment into which a student has simply copied material from the article or any other source will receive 0 points.

Laboratory portion of the course:

The laboratory portion of the course is conducted on campus, in person, every Tuesday and Thursday from 2:20pm-5:30pm in SCI 220. If you are unable to attend the mandatory, in-person laboratories due to class or work conflicts, please do not add this course. The laboratory section is intended not only to reinforce concepts covered during lecture, but also to introduce you to new concepts we don't have time to cover in lecture. This is the "hands-on" portion of the course. Each lab will consist of a short lecture/introduction followed by activities and assignments. You are expected to come to lab prepared to do the activities; reading the labs and familiarizing yourself with the procedures prior to class is required. Participation is expected from every student in the class. You must attend every lab for the entire session; leaving lab before the class is done is unacceptable and will be reflected in your final course grade. A total of 320 points will be earned for the lab portion of the course.

Lab attendance policy:

Lab will meet during the first week of summer session. You must attend the first meeting in order to ensure your enrollment in the course. On-time, regular attendance in lab is required. Roll will be taken during all class meetings. All students are required to stay in lab for the entire duration, even if you have finished the activities earlier than other students; this is a college regulation that we need to follow. Students missing more than 2 labs, unexcused, may be dropped. Students must be enrolled in the course to attend labs.

Lab assignments:

You will be given a lab assignment at the end of every lab, except on the first lab meeting and after sessions when we have practical exams. Details about what is required for these assignments will be clearly defined at the time of the lab. All assignments are due at the end of lab unless otherwise indicated. These assignments, which are considered part of your lab participation, cannot be made up. There are a total of 12 lab assignments; your highest 10 out of 12 scores will count toward your final grade.

Practical exams:

There are two practical exams in the lab. One will test material covered during the first half of the class. The final practical will test material covered SINCE the last practical exam. During a practical exam you will be given models, instruments or even data and will be asked questions about them. This is different from a conventional written exam. It is more interactive and requires you to move about the room through stations which contain questions. Due to the nature of the exam you cannot make up a practical exam. In the case of illness or death in the family, contact your instructor.

Lab etiquette:

Subjective laboratory etiquette points are earned during each lab session. These are intended to award students who demonstrate excellent laboratory behavior. Examples of how to EARN etiquette points: attend lab on time and remain until you are excused, bring the required lab manual and/or handouts, participate in all lab activities, clean up after yourself when lab activities are completed, and keep breaks (e.g. bathroom) and socializing to a minimum. Twenty (20) of these points are for bringing your dietary record handout completed correctly (see schedule).

Course Policy on Cheating:

Cheating and plagiarism are not tolerated on any class assignment, quiz or exam. Students found cheating will receive an “F” on the exam/quiz/practical/activity. You may also be referred to the Vice President of Student Services. Cheating is the act of obtaining or attempting to obtain credit for academic work through the use of dishonest, deceptive or fraudulent means. Examples of cheating include copying from someone else’s exam or quiz, consulting with others during exams or quizzes, or using materials like dictionaries or notes during exams or quizzes. If two students are involved, both will be penalized since it is impossible prove who copied from whom. Please review the principles of academic honesty, which are defined in the Student Handbook and Schedule of Classes.

Mission College Policy on Students Behaving Badly:

It is my responsibility to ensure that all students enjoy a supportive, respectful learning environment. I have a zero-tolerance policy toward any speech or behavior that disrupts the learning environment or prevents any student from achieving their educational goals. This includes, but is not limited to, disruptive behavior in the classroom such as speaking over the instructor, interrupting other students, monopolizing the instructor’s attention such that other students cannot be served, disrespectful, demeaning, or discriminatory remarks of any kind, and any form of coercive behavior toward the instructor or other students. **Any student who engages in such speech or behavior will be told to leave the class for the day, and if the behavior occurs a second time the student will be referred to the Vice President of Mission College for disciplinary action.**

Grade computation:

	Points:
Lecture Exams (100 pt. ea.)	400
Lecture Quizzes (20 @ 10 pt. ea)	200
Writing Assignment	100
Practical Exams (70 & 50 pt.)	120
Lab Assignments (10 @ 10 pt. ea)	100
Lab Etiquette Points	<u>80</u>
Total Points	1000

Letter grades are assigned as follows:

A = 90 - 100%	(900 - 1000 total points)
B = 80 - 89%	(800 - 899 total points)
C = 70 - 79%	(700 - 799 total points)
D = 60 - 69%	(600 - 699 total points)
F = Below 60%	(below 599 total points)

Additional information:

1. Bring your lab manual to each lab session.
2. Eating or drinking in lab is not permitted.
3. The only times that the lab will be open for you to review materials is during the class hours. Please make good use of lab time!

4. Turn off cell phone ringers and pagers when coming to class. Points may be deducted from your course grade if your cell phone or pager interrupts the class, or if I observe you texting during class.
5. No extra time will be given to students who arrive to exams late. Be on time!
6. While not likely, any of the scheduled events may be changed. Adequate notice will be given to the students in the event that this should happen.
7. Observe all safety policies as outlined in your lab manual or covered in class. Use common sense and dress appropriately for a science course with a laboratory portion.
8. No children are allowed in class, and no visitors are allowed without the instructor's permission.
9. Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact DISC (Disability Instructional Support Center) located in S2-201 (408-855-5085 or 408-727-9243 TTY or disc@wvm.edu) to coordinate reasonable accommodations for students with verifiable documentation.
10. Emergency procedures can be found in the orange colored flip chart posted in your classrooms. Each classroom is also equipped with a phone that any student or faculty member can use to call for help during an emergency. Emergency numbers can be called via speed-dial buttons programmed on the phone.
11. Evacuation plan: In the event of an evacuation, the emergency assembly area for this classroom is in Parking Lot C. Take all of your belongings with you. While we will try to evacuate together as a group, if you get separated we will regroup at our assembly area in Parking Lot C. Do not leave campus or the assembly area unless instructed to do so by me or another responsible official (college administrator, police, fire, etc.).
12. Additional emergency information
 - Student health services: 408-855-5140 (5140 if dialing from campus phone)
 - Safety escort: 408-855-5435 (5435 if dialing from campus phone)
 - Nearest campus phone: in the lab, next to the instructor station
 - Nearest public pay phone: main building
 - Nearest fire alarm: second floor by emergency exit in 220
 - Nearest fire extinguisher: second floor between 220&221
 - Nearest first aid kit: in the lab, next to the eye wash station
 - Automatic External Defibrillator (AED): Health Center (W1-303); Library (periodicals); Gym lounge; Applied Science office (W2-402)
13. If you have a complaint or someone has shared information with you as a student or employee that is unlawful discrimination or sexual harassment, contact the Director of Human Resources at West Valley-Mission Community College District, Human Resources Department, 408-741-2060. If the Director of Human Resources is not available, contact the President of the college at 408-855-5123.
14. Mission College is a smoke free campus. Please observe and adhere to the no smoking rules.
15. Important dates for enrollment are listed below. It is the student's responsibility to keep these dates in mind. **Under NO circumstances will the instructor be dropping students after the withdrawal deadline.**

Last day to Add a course	Thursday, June 9
Last day to Drop without a grade	Tuesday, June 14
Last day to request Pass/No Pass grade	Tuesday, June 21
Last day to Drop with a "W" (withdraw):	Thursday, July 14
16. Final Exam Date: Thursday, July 28th at 2:20pm-4:20pm in SCI 220.
17. Important phone numbers:

Counseling	408-855-5030
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Disability Instructional Support Center	408-855-5085
EOPS	408-855-5055
Financial Aid	408-855-5065
Academic Skills Department, Tutorial Center	408-855-5371
Health Services	408-855-5140

18. Angel website. <http://wvmccd.angellearning.com/frames.aspx>

Materials there include: Syllabus & Schedule; Lecture presentations; Lecture PowerPoint handouts; Lecture quizzes; Study Guides; Lab handouts (There are two supplementary lab handouts -- Chemical Digestion and Dietary Record -- that you need to print and bring to lab on the required dates. Failure to do so will result in the loss of etiquette points.)

BIOSC 11 Schedule

Week	Lecture Activities	Dates	Lab Activities
1	The Scientific Method Chemistry Cells View Ch. 1, Ch. 2, Ch. 3 presentations Read Ch. 1, Ch. 2, Ch. 3 Complete Quizzes 1, 2 & 3 by 6/9 (2:00 PM)	6/7	Mandatory introductory meeting Microscopy 2.1: Microscopy 2.3: Light microscopes 2.4: Microscopic observations
		6/9	DNA 17.1: DNA structure and replication 17.2: RNA structure 17.2: DNA and protein synthesis Cell structure and function 4.1: Anatomy of a human cell 4.2: Diffusion of solutes 4.3: Osmosis
2	Genes Tissues View Ch. 4, Ch. 5 presentations Read Ch. 4, Ch. 5 Complete Quizzes 4 and 5 by 6/14 (2:00 PM) LECTURE EXAM 1 on 6/16 at 1:00 PM in SCI 120 Covers Ch. 1-5	6/14	Body Tissues 5.2: Epithelial tissue 5.3: Connective tissue 5.4: Muscular tissue 5.5: Nervous tissue
		6/16	Musculoskeletal system 12.1: Anatomy of a long bone 12.2: The skeleton 12.3: The skeletal muscles
3	Skeletal system Digestive System View Ch. 6.1, Ch. 6.2, Ch. 7 presentations Read Ch. 6.1, Ch. 6.2, Ch. 7 Complete Quizzes 6.1, 6.2 & 7 by 6/21 (2:00 PM) Blood The Cardiovascular System View Ch. 8, Ch. 9 presentations Read Ch. 8, Ch. 9 Complete Quizzes 8 and 9 by 6/23 (2:00 PM) Writing Assignment Article Approval by 6/23	6/21	PhysioEx 8: Chemical digestion *Bring Chemical Digestion handout Energy requirements and ideal body weight 9.1: Average daily energy intake 9.2: Average daily energy requirement 9.3: Comparison of intake and requirement 9.4: Ideal weight *Bring completed dietary record handout
		6/23	The cardiovascular system 7.1: The heart 7.2: Heartbeat and blood pressure 7.3: Blood

Week	Lecture Activities	Dates	Lab Activities
4	The Respiratory System The Urinary System View Ch. 10, Ch. 11 presentations Read Ch. 10, Ch. 11 Complete Quizzes 10, 11 by 6/28 (2:00 PM) LECTURE EXAM 2 on 6/30 at 1:00 PM in SCI 120 Covers Ch. 6-11	6/28	Homeostasis 11.3: Liver 11.4: Kidneys
		6/30	LAB PRACTICAL 1 (covers wk. 6/7-6/28 labs)
5	The Immune System Brain Structure and Function View Ch. 12, Ch. 14 presentations Read Ch. 12, Ch. 14 Complete Quizzes 12 & 14 by 7/5 (2:00 PM) The Senses The Endocrine System View Ch. 15, Ch. 16 presentations Read Ch. 15, Ch. 16 Complete Quizzes 15 and 16 by 7/7 (2:00 PM)	7/5	Nervous system 13.1: Mammalian brain 13.2: Spinal nerves and cord
		7/7	Senses 13.3: Human eye 13.4: Human ear 13.5: Sensory receptors in skin 13.6: Chemoreceptors
6	DNA, Mitosis, Meiosis Human Reproduction View Ch. 17, Ch. 18 presentations Read Ch. 17, Ch. 18 Complete Quizzes 17 & 18 by 7/12 (2:00 PM) LECTURE EXAM 3 on 7/14 at 1:00 PM in SCI 120 Covers Ch. 12; 14-18	7/12	Mitosis and meiosis 15.1: The cell cycle 15.2: Meiosis 15.3: Mitosis vs. meiosis 15.4: Karyotype abnormalities 15.4: Gametogenesis
		7/14	Patterns of genetic inheritance 16.1: Determining the genotype 16.2: Determining inheritance 16.3: Determining the pedigree

Week	Lecture Activities	Dates	Lab Activities
7	Heredity Patterns of Inheritance View Ch. 19, Ch. 20 presentations Read Ch. 19, Ch. 20 Complete Quizzes 19 & 20 by 7/19 (2:00 PM) Writing Assignment due in lab by 7/19 Evolution View Ch. 22 presentation Read Ch. 22 Complete Quiz 22 by 7/21 (2:00 PM)	7/19	Human evolution 18.1: Fossil record 18.2: Comparative anatomy 18.3: Molecular evidence
		7/21	LAB PRACTICAL 2 (covers 7/5-7/19 labs)
8	Ecology Biomes and Natural Resources View Ch. 23, Ch. 24 presentations Read Ch. 23, Ch. 24 Complete Quizzes 23 & 24 by 7/26 (2:00 PM) FINAL EXAM on 7/28 at 2:20 PM in SCI 220 Covers Ch. 19-20; 22-24	7/26	Video
		7/28	NO LAB